

# NESTS Transit Planning Project

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Presentation to  
**TCAT Board of Directors**



January 30, 2003

# Goal of the Study

- **Provide an attractive transit system that will support the NESTS Livability Goals**
  - Reduce use of personal motor vehicles
  - Reduce traffic on neighborhood streets
  - Improve mobility with a multimodal system
  - Enhance coordination with pedestrian and bicycle modes
  - Support land use policies and patterns

# Phases of the Study

- **Market research**
- **Service planning**
- **Facilities planning**
- **Policy options**
- **Development of preferred strategy**

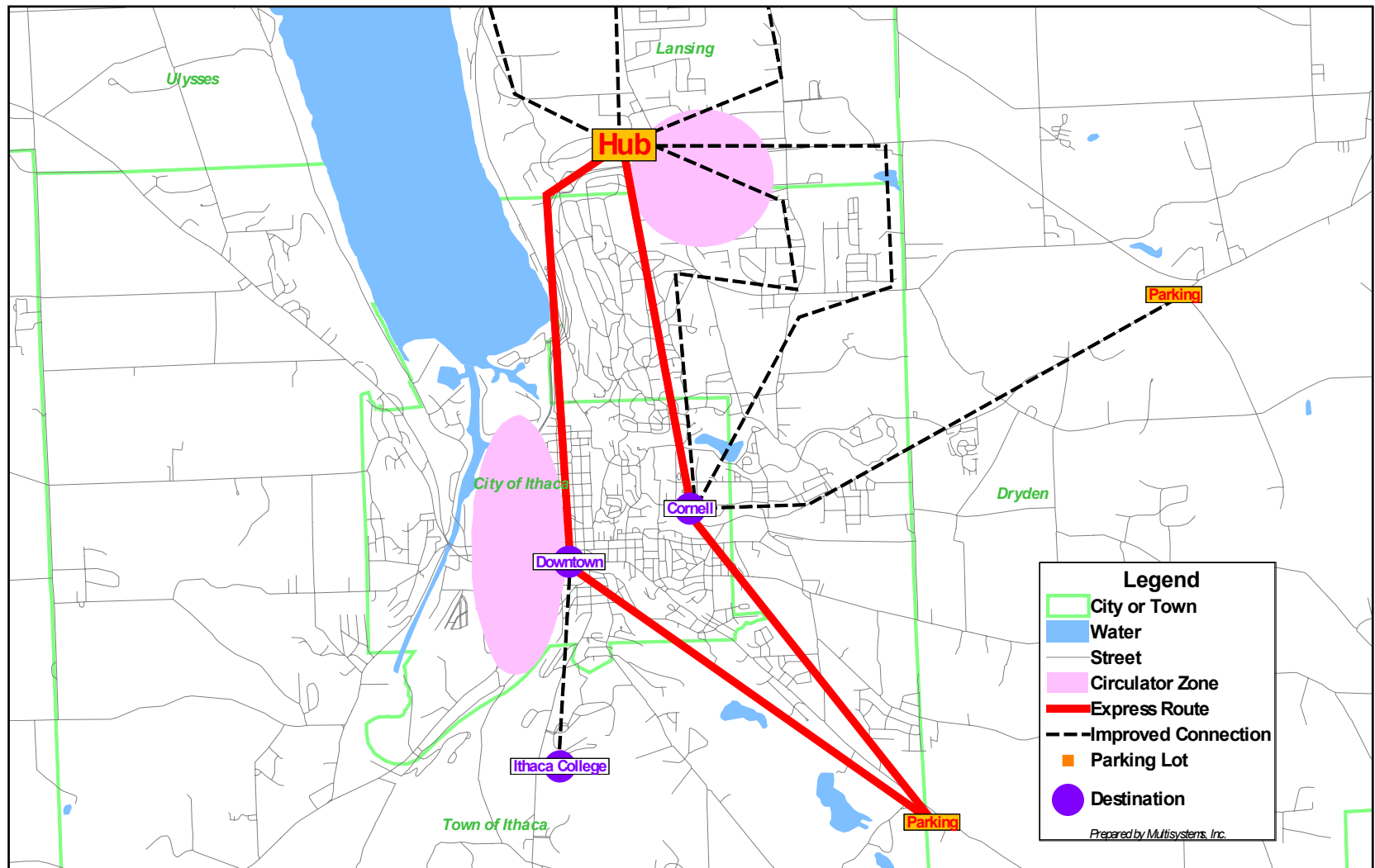
# Market Research

- **Key issues**
  - Coverage
  - Hours of service
  - Travel time
  - Frequency
- **Non-Users**
  - 59% receptive to transit, but most would ride infrequently
- **Users**
  - 79% would ride more if buses ran more often
  - 64% would ride more with later evening service

# Service Enhancement Concepts

- **Improve service on current routes**
  - Make routes more direct
  - Improve connections to important trip attractors
  - Enhance frequency of service
- **Develop new routes**
  - Serve new areas
  - Offer faster and more direct service
- **Improve connections between routes**

# Service Concept



# Southern Area




**Downtown Circulator A -- New Rt.**  
Counter-Clockwise Direction.  
Downtown to Aldi's and  
Southwest Retail Area.  
(Near term action)

**Downtown Circulator B -- New Rt.**  
Clockwise Direction.  
Downtown to Aldi's and  
Southwest Retail Area.  
(Near term action)

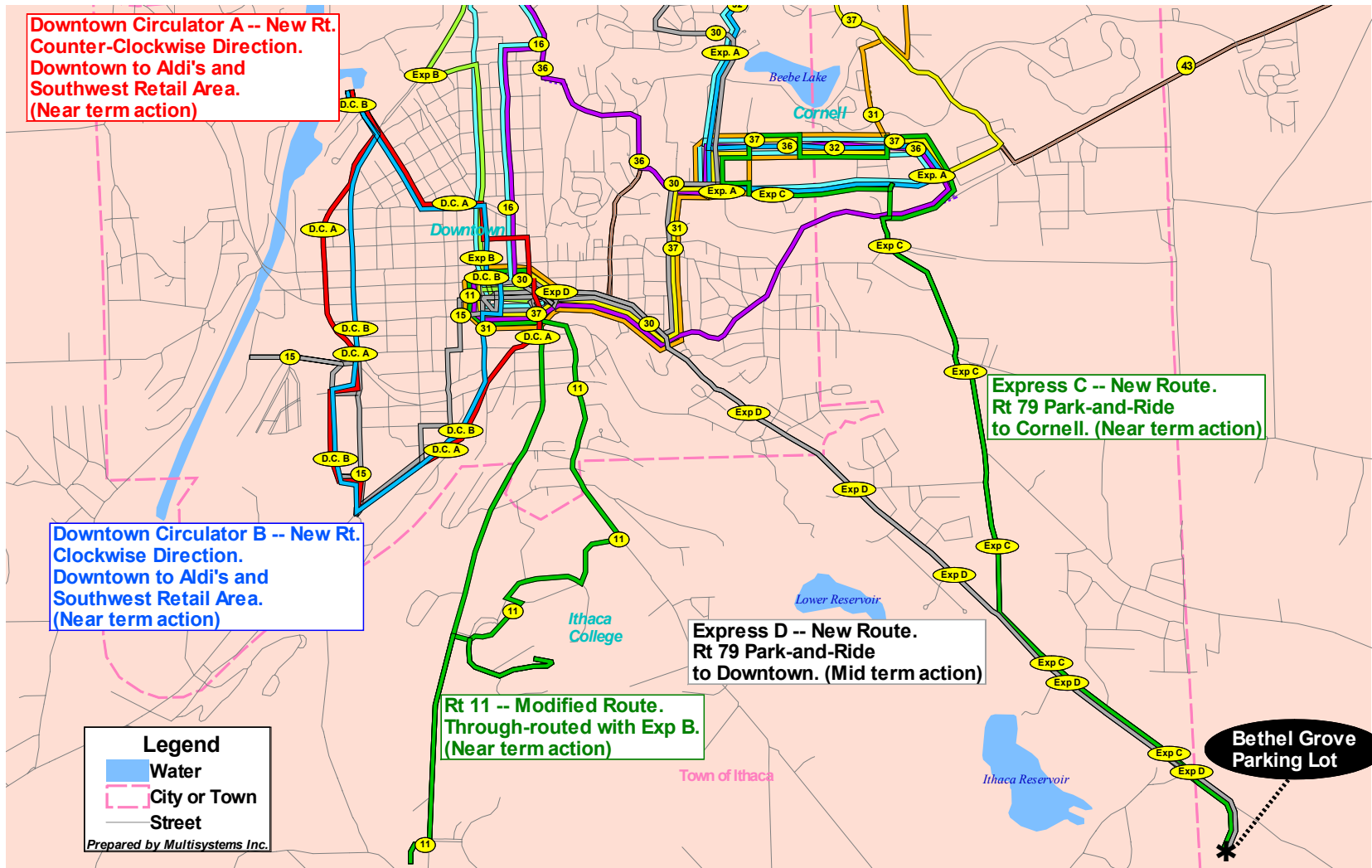
**Rt 11 -- Modified Route.**  
Through-routed with Exp B.  
(Near term action)

**Express D -- New Route.**  
Rt 79 Park-and-Ride  
to Downtown. (Mid term action)

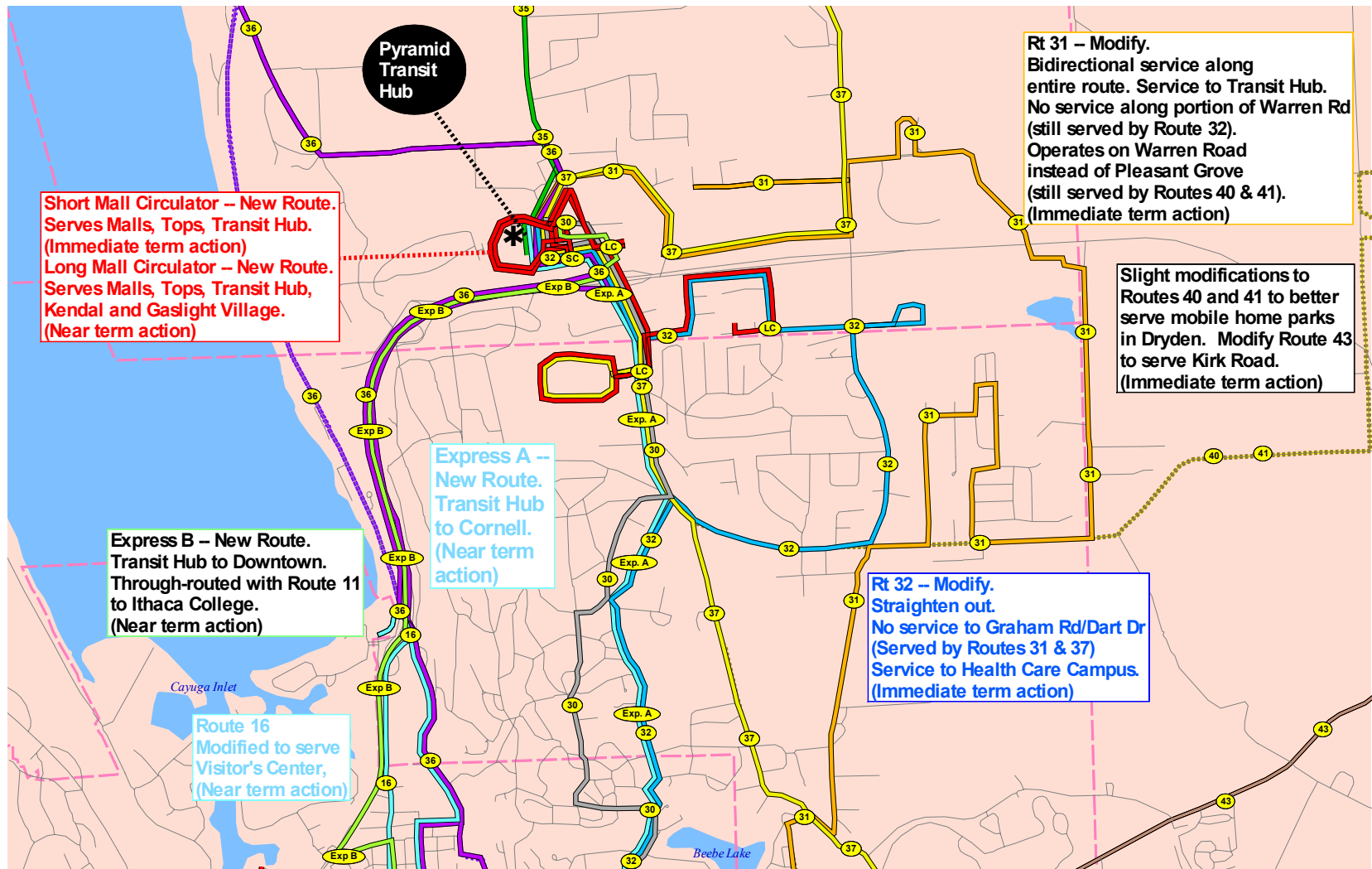
**Express C -- New Route.**  
Rt 79 Park-and-Ride  
to Cornell. (Near term action)

**Legend**  
 Water  
 City or Town  
 Street  
 Prepared by Multisystems Inc.

**Bethel Grove  
Parking Lot**

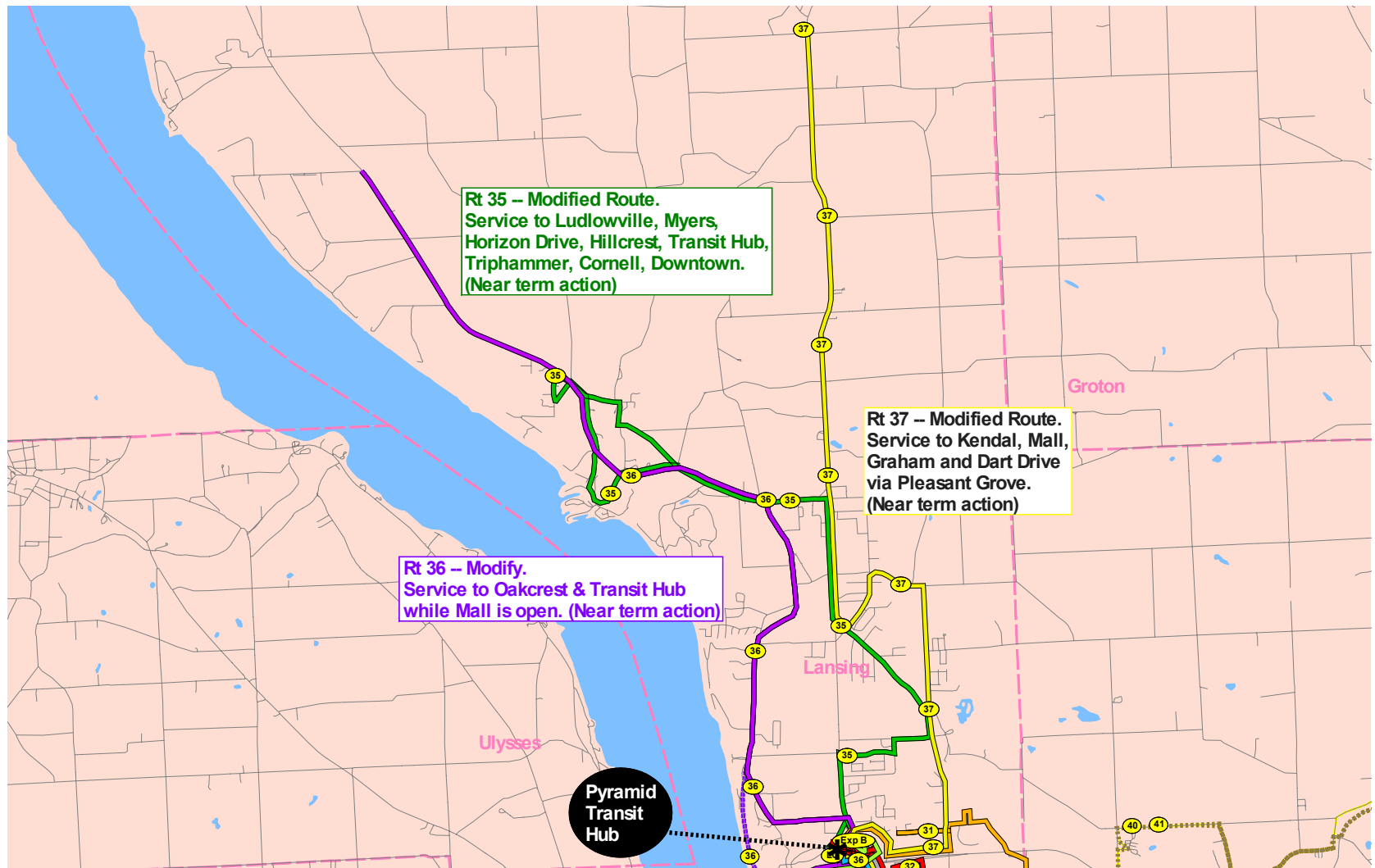


# Central Area





# Northern Area



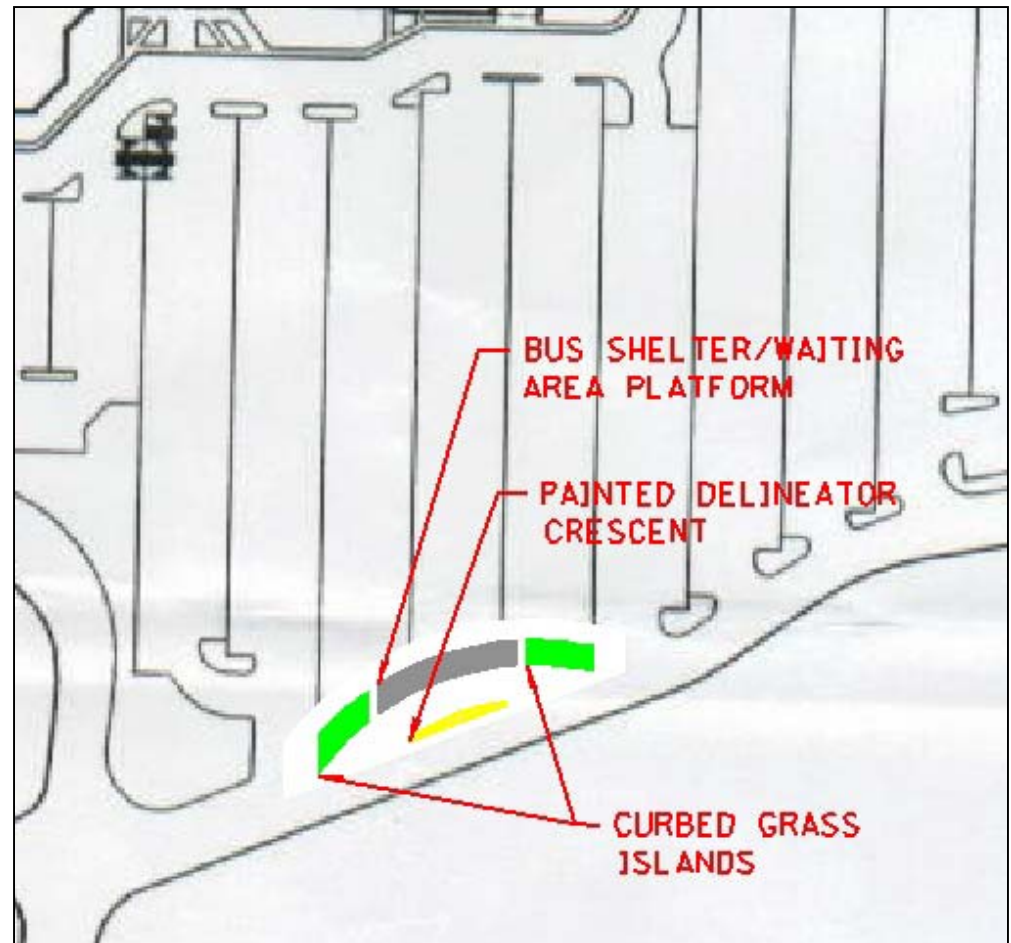
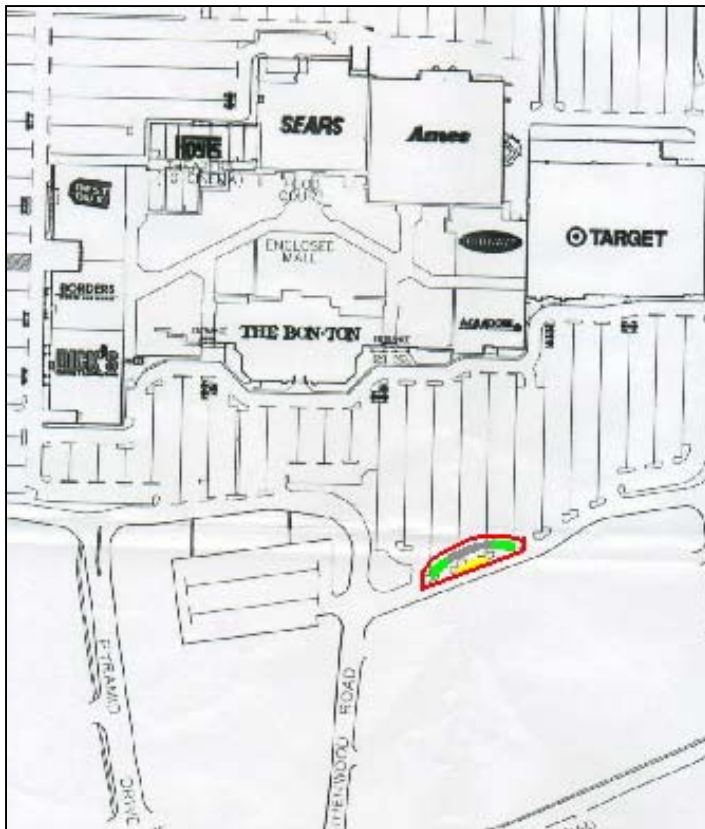
# Facility Enhancement Concepts

- **Passenger facilities**
  - Transit hub at Pyramid Mall
  - Park-and-ride lot in Bethel Grove
  - Additional bus shelters
  - Improved bicycle facilities
- **Applications of technology**
  - Real-time bus arrival information at stops
  - Automated fare collection/smart cards

# Pyramid Transit Hub

- **Excellent collection point for Town and Village of Lansing**
- **Located at intersection of two arterials**
- **Important destination in its own right**
- **Already significant bus service available**
- **Ample existing parking during commuting hours**
- **Mall management receptive to hub**
- **Estimated construction cost: \$150,000**

# Potential Siting at Pyramid Mall



# Crossgates Mall Transit Center



Note: Pyramid Transit Hub would be about half this size

# Potential Service Levels

## ● Basic

- Consistent with current level of service
- 12 hours of service (7:00 AM to 7:00 PM)
- 60-minute headway (new express routes at 30 minutes)
- Limited weekend service

## ● Enhanced

- 14 hours of service (7:00 AM to 9:00 PM)
- 30-minute headways (new expresses at 15 and 20 min.)

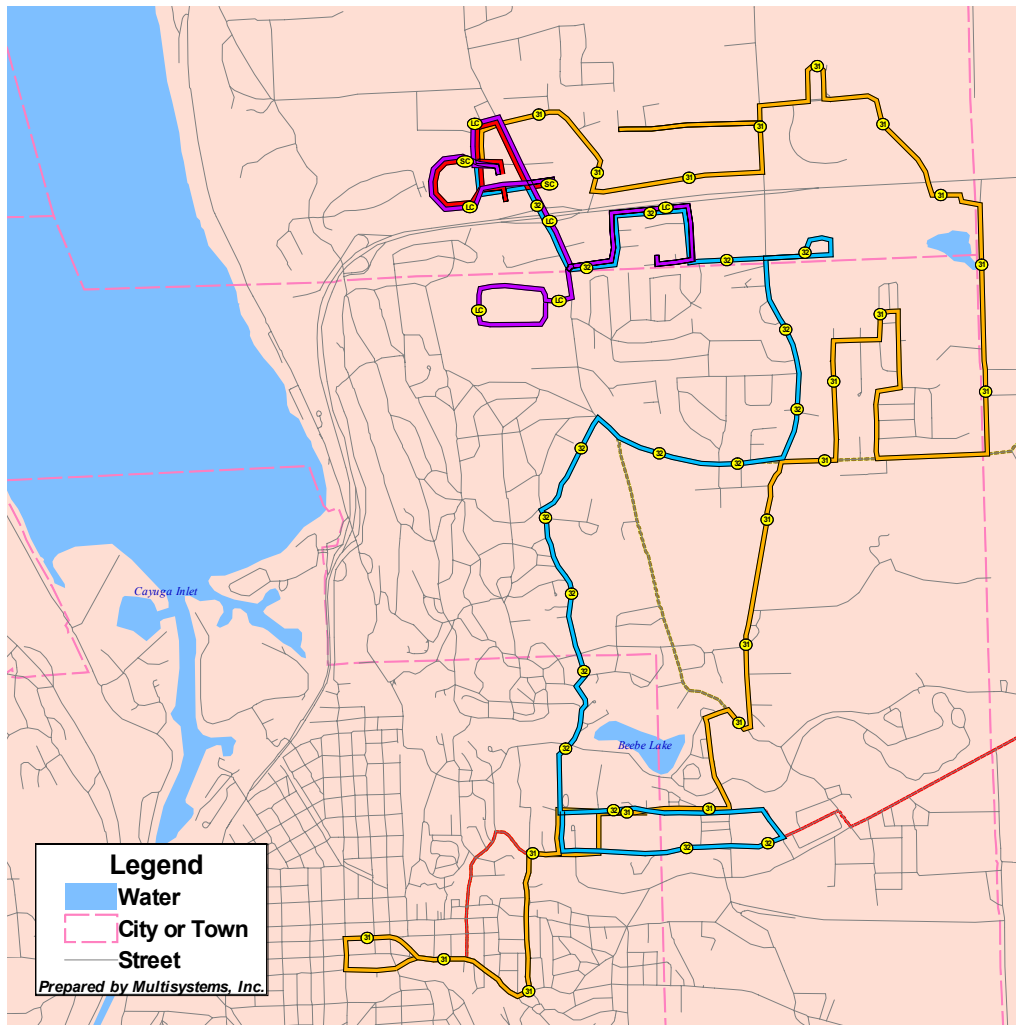
## ● High

- 16 hours of service (6:00 AM to 10:00 PM)
- 20/30-min. peak/off-peak headways (expresses at 10 min.)

# Implementation Schedule

- **Five phases devised**
  - Immediate term (1 to 2 years)
  - Near term (3 to 4 years)
  - Mid term (5 to 7 years)
  - Long term (8 to 10 years)
  - Future (11 years and beyond)
- **Phase in recommended service concept over immediate and near term periods**
- **Boost service levels during mid and longer term periods**

# Immediate Term (Years 1 and 2)



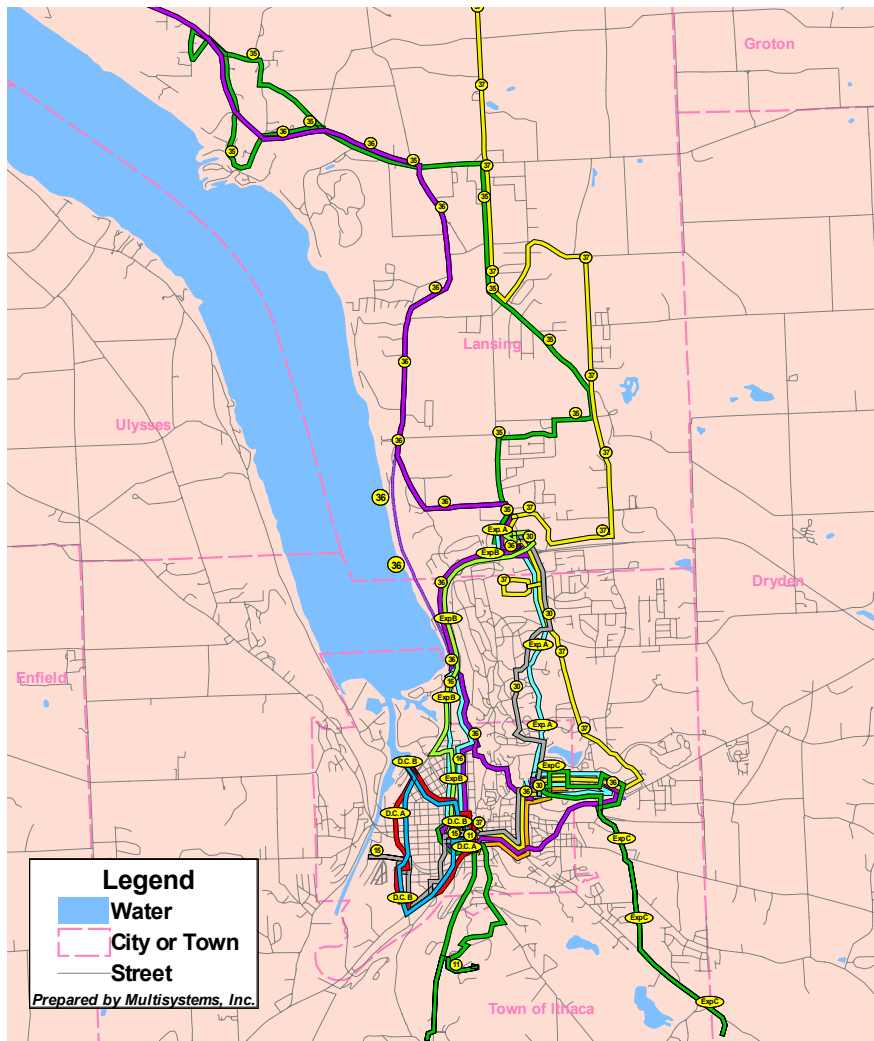
- **Routes 31 and 32**
  - Extend Route 31 to Pyramid Mall via Dart Dr.
  - Eliminate “switchback” on Route 32; direct from Sheraton Drive to Mall
- **Mall circulators**
  - Long route every 30 min. daily 9:00 AM to 7:00 PM
  - Short route Fall shopping season weekends only
- **Routes 40, 41, 43**
  - Better service to mobile home parks in Dryden
  - P&R lot at Rts. 13 & 366



# Immediate Term Impacts

- **Estimated new weekday riders:** **210**
- **Annual fiscal impacts (compared to current)**
  - Gross operating cost increase **\$242,000**
  - New fare revenue **-\$20,000**
  - Additional STOA funds **-\$57,000**
  - Annual local net cost increase **=\$165,000**
- **Capital costs for this phase**
  - 2 new vehicles (1 large, 1 small) **\$385,000**
  - Pyramid Transit Hub **\$150,000**
  - Other shelters and bike racks **\$31,800**

# Near Term (Years 3 and 4)



## ● Express shuttles

- Express A from Pyramid Transit Hub to Cornell
- Express B from Pyramid Hub to downtown Ithaca
- Express C from Route 79/Bethel Grove to Cornell

## ● Downtown circulators

- Service to SW retail area, Meadow, Aldi's, Third St.
- Revise Route 16 to serve Visitors' Center

## ● Routes 35, 36, 37

- Serve Pyramid Transit Hub
- 37 via Kendal & Pleasant Gr.

# Near Term Service Levels

- **Most new routes introduced at Basic level**
  - **Except for express shuttles**
    - **Express A: 15 minutes peak / 30 minutes off-peak**
    - **Express B: 20 minutes peak / 30 minutes off-peak**
    - **Express C: 15 minutes peak / 30 minutes off-peak**
  - **Express B interlined with Route 11 in off-peak periods**
    - **Can serve both Longview and The Towers on every trip**
- **Current TCAT Route 13 replaced**
  - **By Express B, revised Route 16, and Downtown Circulator**
- **Route 80 eliminated**
  - **Due to likely reduced demand at A Lot**

# Near Term Impacts

- **New weekday riders over current:** 620
- **Annual fiscal impacts (compared to current)**
  - Gross operating cost increase \$773,000
  - New fare revenue -\$91,000
  - Additional STOA funds -\$236,000
  - Annual local net cost increase =\$446,000
- **Capital costs for this phase**
  - 7 new vehicles (1 large, 6 small) \$1,010,000
    - Includes one spare small bus
  - Other shelters and bike racks \$31,800

# Mid Term (Years 5 through 7)

- **Express D: Bethel Grove to downtown Ithaca**
  - 30-minute peak period service only
- **Expanded service on Mall circulators**
  - 2 additional evening hours on long route
  - Full year service on short route
- **Downtown circulators improved**
  - 30-minute frequency instead of 60-minute
- **Route 32 improved**
  - 30-minute frequency instead of 60-minute

# Mid Term Impacts

- **New weekday riders over current:** 1,015
- **Annual fiscal impacts (compared to current)**
  - Gross operating cost increase \$1,150,000
  - New fare revenue -\$167,000
  - Additional STOA funds -\$365,000
  - Annual local net cost increase =\$618,000
- **Capital costs for this phase**
  - 3 new vehicles (1 large, 2 small) \$510,000
  - Other shelters and bike racks \$47,700

# Long Term (Years 8 through 10)

- **Routes 15, 30, and 31 improved**

<b>Route</b>	<b>Peak</b>	<b>Off Peak</b>	<b>Saturday</b>	<b>Sunday</b>
<b>15</b>	<b>30 (60)</b>	<b>60</b>	<b>30 (60)</b>	<b>60</b>
<b>30</b>	<b>20 (30)</b>	<b>30</b>	<b>20 (30)</b>	<b>30</b>
<b>31</b>	<b>30 (40)</b>	<b>60</b>	<b>90 (none)</b>	<b>none</b>

Note: Previous headways shown in parentheses

# Long Term Impacts

- **New weekday riders over current:** 1,610
- **Annual fiscal impacts (compared to current)**
  - Gross operating cost increase \$1,550,000
  - New fare revenue -\$278,000
  - Additional STOA funds -\$485,000
  - Annual local net cost increase =\$787,000
- **Capital costs for this phase**
  - 4 new vehicles (all large) \$1,040,000
    - Includes one spare large bus
  - Other shelters and bike racks \$47,700



# Future Period (Year 11 and beyond)

- **Express A and B improved to 10 minutes in peak (from 15)**
- **Express D improved to 15 minutes in peak (from 30)**
- **Downtown circulators improved to 20 minutes (from 30) weekdays off peak and Saturdays**
- **More off-peak service for Route 35**

# Future Period Impacts

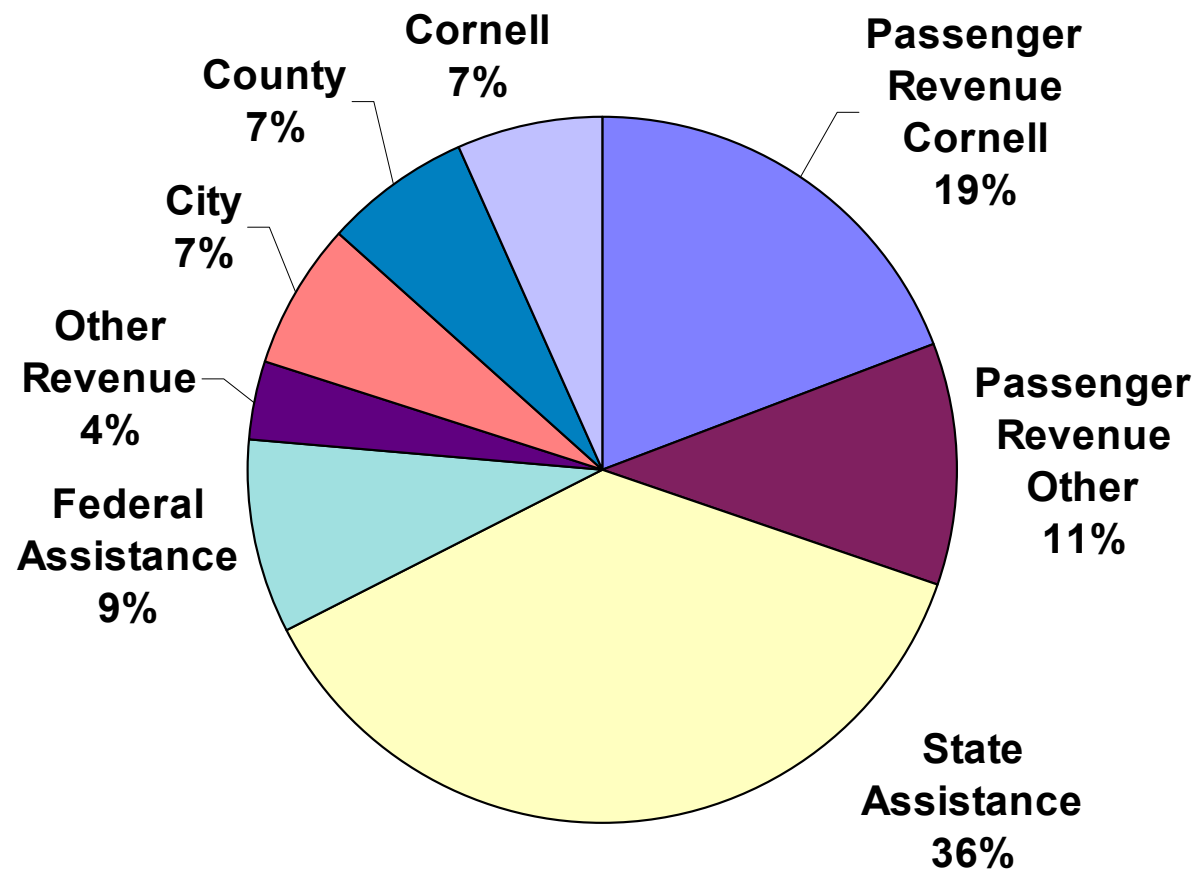
- **New weekday riders over current:** 1,920
- **Annual fiscal impacts (compared to current)**
  - Gross operating cost increase \$1,996,000
  - New fare revenue -\$342,000
  - Additional STOA funds -\$632,000
  - Annual local net cost increase =\$1,022,000
- **Capital costs for this phase**
  - 3 new vehicles (1 large, 2 small) \$510,000
  - Other shelters and bike racks \$16,000 per year

# Net Cost Per Rider

- **Nets out fare revenue and STOA**

<b>Phase</b>	<b>Incremental per New Rider</b>	<b>Cumulative per New Rider</b>	<b>Systemwide</b>
FY 2001	-	-	\$0.33
Immediate Term	\$3.62	\$3.62	\$0.38
Near Term	\$2.28	\$2.65	\$0.47
Mid Term	\$1.17	\$1.95	\$0.50
Long Term	\$0.80	\$1.50	\$0.52
Future Period	\$2.45	\$1.64	\$0.58

# Current TCAT Funding



# Potential New Funding Sources

- **Additional mortgage recording tax**
  - Used by all other upstate transit districts
  - Up to \$750,000 per year
  - Could be used for capital or operating
- **Local community contribution**
  - Direct support from additional towns and villages
- **Private sector contribution**
  - In kind service: maintenance or land donation

# Less Likely New Funding Sources

- **New dedicated taxes**
  - Sales tax
  - Property tax
  - Payroll tax
  - Utility tax
  - Gasoline tax
  - Commercial parking tax
- **Municipal parking revenue**
- **Advertising revenue**
- **Development Related**
  - Transportation impact fees
  - Benefit assessment district
  - Joint development
- **Human service agency contributions/contracts**
- **Private sector**
  - Sale-leaseback or certificates of participation
  - Employer subsidy

# Financial Feasibility

- **Six scenarios analyzed**
  - All assume MRT and new local participants
  - 2 levels of STOA funding
  - 3 levels of federal capital funding
- **With level STOA funding**
  - No increase for current partners until Year 11 with federal funding, or Year 8 with no federal funding
- **With 21% cut in STOA funding**
  - Local share increases immediately

# Next Steps

- **Detailed planning for Immediate Term actions**
- **Set out timeline for Near Term actions**
  - **Procurement of new vehicles**
  - **Detailed planning of the new routes**
  - **Park-and-ride agreements with Pyramid Mall and the Bethel Grove Church**
- **Pyramid Transit Hub**
  - **Secure funding through TIP for FY2004-5**
  - **Begin design and engineering process**





# Benefit: Time Savings

- **Time savings mainly result from**
  - More direct routings for Routes 31 and 32
  - Express A and B faster to Cornell and downtown than Routes 30 and 13
  - Higher frequency on Express A and B means less wait time
- **Total time savings for existing riders**
  - Immediate term 18,600 person hours / year
  - Near term through Long term 24,000 person hours / year
  - Future period 27,000 person hours / year
- **No time savings found for new riders**
  - Still faster to drive

# Benefit: Traffic Reduction

## Average weekday traffic removed from roads

Phase	Immediately North of Route 13	Route 13 – Comm. Corners	Comm. Corners – Cornell	South of Cornell
<i>Base Volume</i>	45,380	19,820	14,280	7,430
Immediate Term	100	0	100	0
Near Term	370	150	250	100
Mid Term	520	300	250	100
Long Term	820	500	700	150
Future Period	870	500	720	150

# Benefit: VHT/VMT Reduction

<b>Phase</b>	<b>Annual VMT Reduction</b>	<b>Annual VHT Reduction</b>	<b>VMT + Accident Cost Reduction</b>
Immediate Term	175,000	20,000	\$ 94,000
Near Term	691,250	97,500	\$ 372,000
Mid Term	942,625	145,000	\$ 507,000
Long Term	1,485,000	257,500	\$ 799,000
Future	1,722,500	287,500	\$ 927,000

VMT=Vehicle Miles Traveled

VHT=Vehicle Hours Traveled